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ABSTRACT

The objective of this research is to provide an outline of evaluation by objectives for a conference entitled Project Evaluation. As far as processes are concerned, this evaluation will result in a session-by-session evaluation form and transparencies to accompany the session-by-session evaluation form and to reinforce the main points under assessment. (Author/DEP)

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TITLE

PROJECT EVALUATION -- BASIC DESIGN AND BASIC FORMS

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FOR THE READER IN A HURRY

PROJECT EVALUATION

Objectives:

The objective of this research is to provide an evaluation by objectives for a conference entitled PROJECT EVALUATION.

As far as processes are concerned, this evaluation will result in:

A. A session-by-session evaluation form.

B. Transparencies to accompany the session-by-session evaluation formand to reinforce the main points under assessment.

Baseline Data:

At the present time, the following products exist:

The workshop agenda
The workshop activity guide

Both the agenda and the activity guide will be analyzed in order to identify key components that can and should be evaluated. Each of these key components will be evaluated in terms of two or three simple yes/no evaluation questions. For example, if the purpose of one of the sessions is to define evaluation, the participants will be asked whether or not they are capable of defining evaluation.

It is to be noted that this session-by-session evaluation by objectives is concerned with assessing the perception of the participants. At the present time, no emphasis is being placed upon determining whether or not the participants can define evaluation to the satisfaction of given expert judges. While such an evaluation approach would be quite appropriate if given in different circumstances, such an approach is not that taken by the present evaluation.

Operational Objectives:

From the above, it can be seen that the process of this evaluation is to develop evaluation forms and related transparencies.

These forms and transparencies will be used to assess the perception of success at far as the workshop participants are concerned.

It is hoped that this assessment will provide data valuable in developing project evaluation and in designing effective overall project evaluation.

The example of the question of defining evaluation was provided as an example rather than as a concrete instance.

It is most likely that the success of the workshop will be based upon the response of participants to the question of whether or not their project evaluation design has been developed satisfactorily in the eyes of the participants at the workshop.

## EVALUATION PRINCIPLES

Principle 1:

All evaluation measures must be broken down into measurable components.

Once the global approach is abandoned for the modular approach, a wider number of independent third party evaluators can participate. Each measurable component of an evaluation can be linked to appropriate needs, objectives, job descriptions, activities, and articulation plans.

In this way, an evaluation switches directions from a global successful or unsuccessful, satisfactory or unsatisfactory to an analytical diagnosis which specifies "what went right" and "what went wrong."

Principle 2:

All individuals concerned with and affected by the evaluation should be consulted before the adoption of specific forms, procedures, interpretations, analyses, and decisions.

A wide variety of individuals should be consulted: for example, evaluators, the people being evaluated, populations affected by the persons being evaluated, and the general public. No one likes to have an evaluation "pop-up" out of nowhere.

## EVALUATION

These evaluation requirements are based on items appearing in the Federal Register for April 24, 1973.

1. A detailed description of the objectives of the proposed evaluation

   A. The objectives
   B. The relationship between the objectives and the purposes of the original legislation

2. A detailed description of the technical approach

   A. The technical approach
   B. The management plan
   C. The statistical design

      1) appropriate randomization
      2) appropriate controls

   D. Techniques of

      1) data collection
      2) data analysis
      3) data synthesis

3. Evaluation personnel

   A. Name
   B. Position
   C. Race
   D. Prior relevant experience of all persons permanently employed (or to be employed) in positions of responsibility

4. Qualifications

   A. A statement of past activities engaged in by the evaluators
   B. An indication of the relative capability of the evaluators

5. Necessary documentation

# INTRODUCTION

The outline of the following material is based upon an excerption and adaption from material originally entitled AN EVALUATION PLANNER distributed by the Office for the Study of Continuing Professional Education, University of Illinois, Urbana, Illinois.

The outline of this material is taken from these sources.

This outline has been filled in with examples taken from other sources.

## Appendix E

## PREPARING AN EVALUATION PLAN*

The following questions and information may be used to prepare an evaluation plan as part of the project proposal.

Audiences: Who is the evaluation for?

The evaluation should provide information both to the persons conducting the project and to the Division of Continuing Education. Those conducting the project need ongoing information on progress being made, so that they can make informed decisions about how they will operate the project. The Division of Continuing Education needs ongoing information on progress, so that it can effectively monitor the project. Information on the final results of the project is needed by the Division so that it may determine whether the processes and products developed by the project should be replicated and disseminated.

Issues: What questions should the evaluation address?

An evaluation basically should provide information about the extent to which project objectives are met or not met. This may include information on behavioral changes in participants, as well as actual products produced by the project. It may account for why objectives were not met, cite alternative approaches, and evaluate the reasonableness of project costs.

Evidence: What evidence should be collected?

Evidence is any information which may help determine the effectiveness of the project. Evidence may take many forms. It may include descriptions of project personnel and adult participants, program content and objectives, the context in which the project operated, and program activities and outcomes. The quality of evidence can be assessed by considering its relevance to the project's objectives; the validity of measures (the extent to which they measure what they are supposed to measure); reliability (the extent to which measures are accurate and consistent); and assessing the degree to which claimed outcomes are due to the project as opposed to other factors.

Data-Gathering: How is the evidence to be collected?

Techniques for collecting data include questionnaires, opinionaires, attitudinal scales, interviews, observations, standardized tests, rating scales and checklists. Questions

about the timing of information collection, explanations to affected persons regarding the reasons for collecting certain data, and appropriate means of coding and storing information must be considered.

Analysis: How can the evidence be analyzed?

Analysis may describe a program, adult students or staff during a given time period; it may also document change in a program, adult students or staff over time. Comparisons might be made, for example, between current program processes or results and those previously recorded, or with comparable aspects of other programs. Some analyses are conducted with a very specific question in mind - To what extent were project objectives met? How was teacher behavior affected by a training program?

Reporting: How can evaluation findings be reported?

The Division of Continuing Education wishes to receive honest and understandable evaluation findings. The reporting of evaluation information can take many forms. These may include case studies, graphs or charts, or test scores, and may be technical or non-technical, descriptive or judgmental, depending upon the nature of the project. Ongoing evaluation findings may be presented to the Division in the regularly scheduled progress reports. Final evaluation findings should be included as part of the final report to the Division.

Evaluation may be conducted by the project itself or by an external source. This decision depends upon the nature and size of the proposed project and will be subject to approval by the Division of Continuing Education.

* Excerpted and adapted from An Evaluation Planner, Office for the Study of Continuing Professional Education, University of Illinois, Urbana, Illinois.

For Whom is the Evaluation?

1. The evaluation is for those persons conducting the project who need:

   a. Ongoing information on progress being made
   b. Informed decisions about how to operate the project

2. The evaluation is for the funding agency that needs:

   a. Ongoing information on progress
   b. Effective monitoring of the project

3. The evaluation is for the general public who need:

   a. An awareness of the processes and products developed by the project
   b. An informed decision about whether the project should be replicated and disseminated

## ISSUES

### What Questions Should the Evaluation Address?

1. An evaluation should provide information about the extent to which project objectives:

   a. Are met
   b. Or not met

2. An evaluation should provide information about:

   a. Behavioral changes in participants
   b. Actual products produced by the project
   c. Actual processes that result

3. When necessary, an evaluation should:

   a. Account for why objectives were not met
   b. Cite alternative approaches
   c. Evaluate the reasonableness of project costs

## EVIDENCE

### What Evidence Should be Collected?

1. Evidence should be collected which helps determine the effectiveness of the project.

2. Evidence may take many forms:

   a. Descriptions of project personnel
   b. Descriptions of adult participants
   c. Program content
   d. Program objectives
   e. The context in which the project operated
   f. Program activities
   g. Program outcomes

3. The quality of evidence can be assessed by considering its relevance to:

   a. The project's objectives
   b. The validity of measures
   c. The reliability of measures
   d. Assessing the degree to which claimed outcomes are due to the project as opposed to other factors

How is the Evidence to be Collected?

1. Techniques for collecting data include:

   a. Questionnaires
   b. Opinionnaires
   c. Attitude scales
   d. Interviews
   e. Observations
   f. Standardized tests
   g. Rating scales
   h. Checklists

2. Other data gathering questions concern:

   a. The timing of information collected
   b. Explanations to effective persons regarding the reasons for collecting certain data
   c. Appropriate means of coding and storing information
   d. Appropriate means of tabulating information
   e. Appropriate means of summarizing information
   f. Appropriate means of interpreting summarized information gathered

## ANALYSIS

How Can the Evidence by Analyzed?

1. Analysis may:

   a. Describe a program, adult students, or staff during a given time period
   b. Document change in a program, adult students, or staff overtime

2. Comparisons might be made, for example:

   a. Between current program processes and results and those previously recorded
   b. With comparable aspects with other programs
   c. With control groups
   d. In terms of gains scores
   e. In terms of comparative gains scores for control groups

3. Some analyses are conducted with very specific questions in mind, for example:

   a. To what extent were project objectives met?
   b. How was teacher behavior affected by a training program?
   c. How was teacher innovative behavior affected by a training program?
   d. How did learners taught by program participants manifest direct or indirect benefits?

How Can Evaluation Findings be Reported?

1. In all cases and in all formats, it is necessary to receive honest and understandable evaluation findings.

2. The reporting of evaluation information can take many forms:

   a. Case studies
   b. Graphs or charts
   c. Test scores
   d. Technical data
   e. Non-technical data
   f. Descriptive data
   g. Judgment data

3. Ongoing reports should be considered as a typical means of followup.

4. Final evaluation findings should be reported in the final report or in a followup report scheduled for a definite time period after the final report.

Who Should Conduct the Evaluation?

1. Evaluation may be conducted by:

   a. The project itself
   b. An external source
   c. A combination of the above
   d. Properly selected impartial judges

2. Such a decision depends upon the nature, size, and objectives of the proposed project and is always subject to approval from the funding agency to whom the evaluation report is submitted.

## A RETROSPECT ON THE PRECEDING PAGES

1. So far this approach to evaluation is not particularly original.

2. In place of originalty, the criteria of analysis and outlining has been stressed.

3. This type of analysis and outlining enables the potential evaluator and persons being evaluated to look for a number of common elements that can produce a proper evaluation.

4. In general, the next task of the evaluator and of the persons being evaluated is to look at the preceding outline with one question in mind:

   How can the evaluation measures be broken down into measurable components?

   These components should be measured by a wide variety of individuals:

   Project personnel
   Project participants
   Individuals affected by the program participants
   Funding agency
   General public
   Interested external observers

## EVALUATION DESIGN

## FOR A WORKSHOP ON PROJECT EVALUATION

From a design point of view, five elements can be identified in this evaluation:

STRUCTURED
UNSTRUCTURED

OBSERVER
NON-OBSERVER

RESEARCH

Each of the above five factors can be studied separately:

1. Structured: For certain specific workshop sessions, three objectives have been identified. Each objective has been converted into a correlated evaluation item. Participants respond yes or no to the accomplishment of each objective.

2. Unstructured: For certain other workshop activities, several questions are asked:

   What are the effective components of the workshop in your opinion?

   What are the ineffective components of the workshop in your opinion?

   Which components of the workshop should be changed?

   Were the workshop activity guides effective? Explain.

   The responses to these unstructured questions can be grouped and compared with the responses to the structured evaluation items.

3. Observer: Certain of the workshop observers were present during the entire workshop. These observers have adequate opportunities to observe the people at the workshop as well as things produced. These observer evaluations can be used to parallel and amplify the above structured and unstructured evaluation components.

4. Non-Observer: Some of the workshop evaluators did not attend any of the sessions of the workshop. These non-observers must rely upon data transmitted in evaluation instruments and upon visible products resulting from the workshop. These non-observers can provide another perspective that will round out the picture provided by structured evaluation, unstructured evaluation, and observer evaluation.

5. Research: Several research questions can be asked of the above data:

Do the structured and unstructured evaluation instruments provide a coherent or a conflicting interpretation of the success or failure of the workshop?

Can the observer and non-observer evaluations be meshed in such a way as to provide both subjective and objective assessments of the workshops?

What changes in the above evaluation design should be made in order to better accomplish the objectives of the evaluation?

## SUPPLEMENTARY DOCUMENTS

ADMINISTRATIVE WORKSHOP PRETEST

EVALUATION FORM I

EVALUATION FORM II

RESULTS FROM EVALUATION FORM I

RESULTS FROM EVALUATION FORM II

These forms enable the reader to replicate without loss of time.

These forms do the job described above in a very simple, direct, and professional fashion.

## Administrative Workshop Pretest

**Purposes:** The purposes of this pretest are:

1. To illustrate one evaluation technique, and
2. To provide a basis for the direction of workshop activities.

**Task:** Please bring the completed pretest to the Monday evening orientation session.

Correct Answer (% Correct) Answer Column

**I. Instructions:** Please read each of the following statements. If the statement is true, put T in the answer column; if false, put F.

1. The primary purpose of evaluation is to determine whether a project should be refunded. — F (100%)
2. Most evaluation designs should include the use of a control group. — F (32%)
3. Evaluation involves human judgment. — T (93%)

**II. Instructions:** Each of the following groups of statements involves terms frequently used in project evaluation. After reading each statement, please enter in the answer column the number of the term which best completes the statement. Terms may be used more than once.

Terms: (1) the evaluation plan; (2) summative evaluation; (3) formative evaluation

4. Periodic progress reports provide _____. (Enter No. 1, 2 or 3). — 3 (78%)
5. A report of project findings is contained in _____. — 3 (82%)

Terms: (1) population; (2) independent variable; (3) dependent variable

6. Behavior being studied is the _____. — 3 (43%)
7. A sample is a subset of a (an) _____. — 1 (64%)
8. The universe being studied is the _____. — 1 (68%)

Terms: (1) goal; (2) objective; (3) evaluation plan; (4) priority

9. A statement identifying desired outcomes is a (an) _____. — 1 (64%)
10. A statement identifying desired behavior is a (an) _____. — 2 (71%)

Answer Column

Terms: (1) mean; (2) median; (3) mode

11. The _____ is the most frequent score in a distribution. 3 (68%)

12. The _____ is the most highly used measure of central tendency. 1 (36%)

13. The _____(s) of two or more distributions can be averaged together. 1 (50%)

14. The arithmetic average of a group of figures is the _____. 1 (82%)

Terms: (1) central tendency; (2) dispersion; (3) range; (4) centile

15. The distance between the highest and the lowest of a group of figures is the _____. 3 (78%)

16. A measure of _____ is used to determine the variability of a group of figures. 2 (46%)

## Evaluation Form I

**Instructions:** Please indicate your evaluation of the previous session by circling either the YES or the NO response.

| | | | % of Yes |
|---|---|---|---|
| 1. | Are you aware of the differences between goals and objectives of a given program? | YES NO | 96% |
| 2. | Are you aware of the characteristics of evaluation? | YES NO | 85% |
| 3. | Are you aware of at least five strategies with which to conceptualize evaluation tasks? | YES NO | 69% |
| 4. | Did the presentation help you to complete the worksheet? | YES NO | 54% |
| 5. | Did completion of the worksheet help you identify the major objectives of your project? | YES NO | 85% |

## Evaluation Form II

**Instructions:** Please indicate your evaluation of the previous session by circling either the YES or the NO response.

| | | | % of Y |
|---|---|---|---|
| 1. Do you accept the importance of having project objectives which are stated in behavioral terms? | YES | NO | 100% |
| 2. Do you accept the importance of having objectives which are specific and measurable? | YES | NO | 100% |
| 3. Did the presentation help you to complete the worksheet? | YES | NO | 83% |
| 4. Did completion of the worksheet help you state project objectives in measurable terms? | YES | NO | 89% |
| 5. Are you able to write project objectives so that they contain behaviors and acceptable levels of performance? | YES | NO | 94% |
| 6. Are you able to write your project objectives so that they are specific, pertinent, attainable, measurable, and observable? | YES | NO | 83% |

## RESULTS FROM

## EVALUATION FORM I

As a result of Evaluation Form I, the 26 respondents can be described as follows:

1. 96% are aware of the differences between goals and objectives of a given program

2. 85% are aware of the characteristics of evaluation

3. 69% are aware of at least five strategies with which to conceptualize evaluation tasks

4. 54% felt the presentation helped them complete the worksheet

5. 85% felt the worksheet helped them identify the major objectives of the project

Recommendations

In response to finding #3, it is recommended that more emphasis be given to strategies that can be used to conceptualize evaluation tasks.

In response to finding #4, it is recommended that the presentation be more clearly linked to completion of the worksheet.

In response to finding #5, it is recommended that the worksheet be used the next time the presentation is made with the understanding that the presentation will be more highly organized around the worksheet.

## RESULTS FROM
## EVALUATION FORM II

As a result of Evaluation Form II, the 18 respondents can be described as follows:

1. 100% accepted the importance of having project objectives which are stated in behavioral terms
2. 100% accepted the importance of having objectives which are specific and measurable
3. 83% found the presentation helped them complete the worksheet
4. 89% found the completion of the worksheet helped them state project objectives in measurable terms
5. 94% were able to write project objectives that contained behaviors and acceptable levels of performance
6. 83% were able to write project objectives that are specific, pertinent, attainable, measurable, and observable

Recommendations

In response to finding #3, it is recommended that this presentation continue to be organized around the completion of the worksheet.

In response to finding #4, it is recommended that the completion of the worksheet continue to follow the presentation.

In response to findings #5 and #6, it is recommended that the presentation be continued since it contributed to accomplishing the workshop objectives.

As a result of overviewing the pretest, Evaluation Form I and Evaluation Form II, it is recommended that:

A. The pretest include questions that enable the participants to distinguish properly written objectives from improperly written objectives.

B. The pretest include questions that enable the workshop participants to distinguish properly designed evaluations from improperly designed evaluations.